

RUDNEV, N.A.; MALOFEYeva, G.I.; RASSKAZOVA, V.S.

Determination of small quantities of thallium in rocks. Zav.lab. 27
no.1:20-21 '61. (MIRA 14:3)

1. Institut geokhimii i analiticheskoy khimii imeni V.I. Vernadskogo
Akademii nauk SSSR.

(Thallium--Analysis)
(Rocks--Analysis)

RUDNEV, N.A.; MALOFEYeva, G.I.

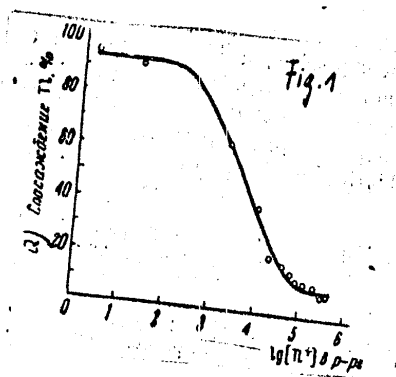
Coprecipitation in the system Ti^{4+} , $H^{+} || ReO_4^{-}$, S^{2-} . Zhur.neorg.
khim. 6 no.10:2399-2405 0 '61. (MIRA 14:9)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo
Akademii nauk SSSR.
(Systems (Chemistry)) (Precipitation (Chemistry))

RUDNEV, ~~***~~; MALOFEYeva, G.I.

Coprecipitation of Ti^{4+} with PdS . Zhur.neorg.khim. 6 no.8:1885-1890
Ag '61. (MIRA 14:8)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo
AN SSSR.
(Titanium) (Palladium sulfide) (Precipitation (Chemistry))



S/078/61/006/002/012/017
B017/B054

Таблица 2
Определение соотношения между висмутом и таллием в смешанном осадке сульфидов Bi_2S_3 и Tl_2S

Введено Bi , мг 1	Введено Tl , мг 1	Соотношение в растворе $\text{Bi}^{3+} : \text{Tl}^{3+}$ 2	Соотношение в осадке $\text{Bi} : \text{Tl}$ 3
20,90	204,4	1:10	1:0,97
20,90	306,6	1:15	1:0,85
20,90	408,8	1:20	1:1,5

Legend to Fig. 1: a) in solution, b) coprecipitated Tl
Legend to Table 2: 1: added, 2: ratio in the solution, 3: ratio in the precipitate

Card 4/4

Study of Coprecipitation in the System
 $\text{Bi}^{3+}, \text{Tl}^{+}, \text{H}^{+} \parallel \text{S}^{2-}$

S/078/61/006/002/012/017
 B017/B054

disintegration of the Bi_2S_3 precipitate. L. I. Zemlyanova and K. F. Fedotova assisted in the experiments. N. S. Kurnakov, S. F. Zhemchuzhnyy, V. A. Ageyeva, N. V. Ageyev, and Ye. S. Makarov are mentioned. The authors thank I. P. Alimarin for directing the work. There are 4 figures, 5 tables, and 11 Soviet references.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy)

SUBMITTED: October 7, 1959

Card 3/4

Study of Coprecipitation in the System Bi^{3+} , Tl^{+} , H^{+} | S^{2-}

S/078/61/006/002/012/017
B017/B054

dependent on the thallium concentration in the solutions. The coprecipitation curve shown in Fig. 1 is characteristic of the formation of solid solutions. At higher concentrations of Tl^{+} , the ratio of Bi to Tl in the precipitate becomes 1 : 1. This corresponds to the formation of a compound TlBiS_2 . With a further increase of the thallium concentration in the solution, the Bi/Tl ratio in the solid phase rises from 1 : 1 to 1 : 1.5. Table 2 shows the Bi/Tl ratio in the sulfide precipitates. The formation of the new compound TlBiS_2 was confirmed by X-ray analysis. Previously precipitated Bi_2S_3 adsorbs higher amounts of thallium within 15 min until reaching a Bi/Tl ratio of 1 : 0.2. Aging of Bi_2S_3 was studied by electron microphotography. Particles disintegrate during aging. By exchanging experiments of Bi_2S_3 with Bi(RaE) it was found that the Bi_2S_3 precipitate had a large surface. Desorption of the coprecipitated Tl occurs during aging of the Bi_2S_3 precipitate. The desorption effect is explained by

Card 2/4

AUTHORS:

Rudnev, N. A., Malofeyeva, G. I.

S/078/61/006/002/012/017
B017/B054

TITLE:

Study of Coprecipitation in the System Bi^{3+} , Tl^+ , H^+ / S^{2-}

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 2,
Pp. 453 - 461

TEXT: To study the character of coprecipitation of thallium with bismuth sulfide, the authors made physicochemical investigations at constant bismuth concentration with varying thallium concentration

(Bi^{3+} : $\text{Tl} = 1 : 0.98 \cdot 10^{-4}$ to $1 : 20$). The coprecipitation of thallium with Bi_2S_3 was studied in dependence on various factors (concentration of Tl^+ , pH of the solution, storing time of the precipitate in the mother lye, addition of thallium to the previously separated Bi_2S_3 precipitate). The Bi_2S_3 Coprecipitation was observed with the radioactive isotope Tl^{204} . Fig. 1 shows the precipitates were studied by chemical and X-ray analyses. Fig. 1 shows the results of investigation concerning the coprecipitation of thallium as

Card 1/4

The Method of Acid Decomposition in the Determination of Thorium and Uranium in Sandstone

SOV/32-24-10-2/70

at 180 - 200°. If the silicate weighed in is ground not more coarsely than 200 mesh a heating up to 180 - 200° within 2 hours guarantees a complete decomposition of the material. In the case of heating up to 300° during 2 hours with 11 - 12 n hydrochloric acid even several oxides which are difficult to dissolve decompose. The given course of the analysis shows among other things that thorium is determined colorimetrically by means of the reagent "arsenazo" and uranium according to the luminescence method. Tables of the obtained results are given. There are 1 figure, 2 tables, and 3 references, 2 of which are Soviet.

ASSOCIATION:

Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo Akademii nauk SSSR (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, AS USSR)

AUTHORS: Kuznetsov, V. I., Malofeyeva, G. I., SOV/32-24-10-2/70
 TITLE: The Method of Acid Decomposition in the Determination of
 Thorium and Uranium in Sandstone (Metod kislotnogo raz-
 lozheniya pri opredelenii toriya i urana v peschanikakh)
 PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 10, pp 1178-1179
 (USSR)

ABSTRACT: The decomposition of silicate materials is usually carried out by means of a treatment with hydrofluoric acid or with a soda melt. A silicate decomposition is described as well in the literature (Ref 1). In the present case the method of acid decomposition of silicates according to Pucci and Maffei (Putstsi and Maffi) (Ref 2) was used. The method is quick and simple, the metal extraction quantitative, and no destruction of the ampules in which the reaction was carried out under pressure was found to occur. An inner diameter of the ampules of 12 - 15 mm in the case of a wall thickness of 2 - 3 mm is recommended. The ampules are to be filled up no higher than 1/3 of the volume. The decomposition is to take place

Card 1/2

SOV/75-15-4-16/29

An Analytical Investigation of the Precipitation of Tetravalent Uranium With
Sodium Hexametaphosphate

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: May 30, 1957

1. Uranium---Precipitation
2. Uranium---Chemical reactions
3. Sodium phosphates---Properties
4. Sodium phosphates---Chemical reactions

SOV/75-13-4-16/23

An Analytical Investigation of the Precipitation of Tetravalent Uranium With Sodium Hexametaphosphate

phate are the following: 3n perchloric acid solution, and in the case of an amount of more than 2 mg uranium a final concentration of the reagent of 0,30-0,35%. For lower amounts of uranium thorium is used as collector. Thus, also traces of uranium are co-precipitated. The molar ratio between thorium and PO_3^- must not exceed 1:5, as otherwise too low results are obtained. As washing liquid for the precipitate diluted perchloric acid is suited. The determination of uranium according to the precipitation is carried out vanadometrically. Tri- and tetravalent vanadium (2-20 mg), iron, and copper (of up to 200 mg each) and other bivalent elements do not exert a disturbing influence. Spectrophotometric investigations showed that in the case of an excess of reagent complex compounds of uranium with hexametaphosphate are formed (the measurements were carried out by means of a spectrophotometer of the type SF-4). The method elaborated for the determination of uranium is described in detail. There are 3 figures, 5 tables, and 12 references, 7 of which are Soviet.

Card 3/4

SOV/75-13-4-16/29

An Analytical Investigation of the Precipitation of Tetravalent Uranium With Sodium Hexametaphosphate

prepared solution of the reagent pyro- and orthophosphate are practically not present, they form, however, gradually in storing the solution. In order to separate uranium as quantitatively as possible a sulfuric acid or perchloric acid solution must be heated to 60-70° prior to the precipitation. After the precipitation the solution must be heated with the precipitate for another 10-15 minutes in the water bath. Tetravalent uranium precipitates quantitatively from perchloric acid solution only in a narrow concentration interval, viz. from $3n \text{ HClO}_4$. In the case of higher and lower acidity the amount of the precipitated uranium is quickly reduced, which obviously is connected with an increase of the solubility of the compound at the expense of the hydrolysis of hexametaphosphate, or that it is connected with the possibility of the formation of complex compounds of uranium. Uranium cannot be quantitatively precipitated from sulfuric acid solutions by means of hexametaphosphates. This fact was also found in the precipitation with orthophosphate (Refs 6, 11) and it is explained by the formation of complex sulfates of uranium. The conditions for the quantitative separation of uranium with sodium hexameta-phos-

Card 2/4

SOV/75-13-4-16/29

AUTHORS: Alimarin, I. P., Nikolayeva, Ye. R., Malofeeva, G. I.

TITLE: An Analytical Investigation of the Precipitation of Tetra-valent Uranium With Sodium Hexametaphosphate (Analiticheskoye izucheniye reaktsii osazhdeniya chetyrehvalentnogo urana geksametafosfatom natriya)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol. 13, Nr 4, pp. 464-468 (USSR)

ABSTRACT: Methods are known for the precipitation of uranium with salts of the ortho- and pyrophosphoric acid as well as of the phosphorous acid (Refs 1-3). A considerable disadvantage of the gravimetric determination of uranium after the annealing of its orthophosphate to the pyrophosphate consists of the fact that the compounds formed do not have a constant composition. In the present paper the use of the compound of sodium hexametaphosphate with tetravalent uranium, which is difficult to dissolve, is considered for the separation of small amounts of uranium. Aqueous solutions of sodium hexametaphosphate are considerably stable in the cold. By heating or acidifying the solution it was, however, hydrolysed (Refs 7, 10). In the freshly

Card 1/4

ALIMARIN, I.P.; BILIMOVICH, G.N.; BUSEV, A.I.; VAYNSHTEYN, E.Ye.; VOLYNETS, M.P.; GORYUSHINA, V.G.; DYMOV, A.M.; YELINSON, S.V.; ZVYAGINTSEV, O.Ye.; KOLOSOVA, G.M.; KORCHEMNAYA, Ye.K.; LEBEDEV, V.I.; MALOFEEVA, G.A.; MELENT'YEV, B.N.; NAZARENKO, V.A.; NAZARENKO, I.I.; PETROVA, T.V.; POLUEKTOV, N.S.; PONOMAREV, A.I.; RYABUKHIN, V.A.; STROGANOVA, N.S.; CHERNIKHOV, Yu.A.; VINOGRADOV, A.P., akademik, otv. red.; RYABCHIKOV, D.I., doktor khim. nauk, prof., otv. red.; GUS'KOVA, O., tekhn. red.

[Methods for the determination and analysis of rare elements] Metody opredeleniia i analiza redkikh elementov. Moskva, 1961. 667 p.
(MIRA 14:7)

1. Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii.
(Metals, Rare and minor)

MALOFEYEV, V.I.

Wide-row seedings of winter rye on the Karelian Isthmus. Group No. 101.
Ser. 4 no. 17-91-94 '64. (MIRA 18.1)

NICHIPOROVICH, A.A.; MALOFEYEV, V.

Principles of the formation of highly productive photosynthesizing systems. Fiziol.rast. 12 no.1:3-12 Ja-F '65. (MIRA 18:3)

1. Institut fiziologii rasteniy imen. Timiryazeva AN SSSR, Moskva.

MALOFSEYEV, T. dots.

New wage system for combine operators. Nauka i pered. op. v
sel'khoz. 8 no.8:7-8 Ag '58. (MIRA 11:10)

1. Blagoveshchenskiy sel'skokhozyaystvennyy institut.
(Wages) (Collective farms)

MURAV'YEV, K.N.; MALOFEYEV, P.R., inzhener, redaktor; LEONOV, A.G., inzhener, redaktor.

[Repair of metal cutting machines; technology and organization] Remont metallorezhushchikh stankov; Tekhnologiya i organizatsiya. Izd. 2-a, perer. i dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1955. 304 p. (MIRA 8:4)
(Machine tools)

MALOFEYEV, N.V., starchiy elektromonter.

Utilizing electric furnaces for various processes. Energetik 1 no.4:26-27
S '53. (MLR 6:8)
(Electric furnaces)

MALYUSOV, V.A.; MALOFEYEV, N.A.; ZHAVORONKOV, N.M.; Prinimala uchastiye
ARISTOVA, I.V.

Some methods used for increasing the effectiveness of centrifugal
molecular stills. Khim.prom. no.8:695-699 D '59. (MIRA 13:6)
(Distillation apparatus)

Investigations of the Distillation Process in a Molecular Still of the Centrifugal Type

64-1-7/19

computation of the distillation velocity. The formula according to Burrows (reference 12) is used, whereby a satisfactory agreement is obtained. Investigations of the distribution effect showed that at increased temperature the output of the apparatus decreases which seems to be due to the increased vaporization velocity and the diffusion of the more volatile EGF from the liquid centre. The output amounts e. g. to 0,75 at 134°C. The distillation velocity is computed according to a modified computation formula of Carman (reference 14), whereby the influence of inert gases is taken into account. It was found that an improvement of the distillation process is obtained by the reduction of the vacuum, since the splashing of the distillate is reduced as well. Some formulae for the practical computations of the apparatus of the centrifugal type are given. There are 9 figures, and 15 references, 7 of which are Slavic.

Library of Congress.

AVAILABLE:

1. Molecular distilling plants-Centrifugal-Test results
2. Distilling plants-Test results
3. Distilling plants-Laboratory

Card 2/2

MALOFEYEV, N. A.

AUTHORS: Malyusov, V. A., Malofeyev, N. A., Zhavoronkov, N. E. 64-1-7/19

TITLE: Investigations of the Distillation Process in a Molecular Still of the Centrifugal Type
(Issledovaniye protsessa distillyatsii v molekulyarnom kube tsentrobezhnogo tipa)

PERIODICAL: Khimicheskaya Promyshlennost', 1958, Nr 1, pp. 31-36 (USSR).

ABSTRACT: Investigations were carried out in a laboratory molecular centrifugal distilling still with a conical rotor. A mixture of di-2-ethylhexyl-phthalate (EGF) and di-2-ethylhexylsebacinate (EGS) was used. The distribution coefficient of the mixture is independent of the composition in the case of a nonequilibrium vaporization and depends only on temperature. The investigations of the temperature influence and of the charging on the distillation temperature have shown that in the last case at temperatures up to 125°C somewhat higher results are obtained than were expected according to the computation. This is assumed to be due to a splashing of the liquid on the rotor during the distillation, and not to faulty design. The thereby produced error is given with approximatively 0,2 and a correcting formula is given for the

Card 1/2

On the Coefficient of the Separation of Mixtures Under High Vacuum Evaporation.

20-4-36/51

those of Khikman and Trevoj for α_M are, however, somewhat deeper for α_P . The authors are not able to explain these divergencies, except that in the case of Khikman and Trevoj a partial rectification took place. Figure 4 gives the dependence of α_M and α_P on the temperature. It is necessary to complete the method of measuring of the coefficients of separation. Nevertheless the results obtained in this paper are a confirmation of the rightness of the relation (8) at lower temperatures and of the fact that the relation α_M/α_P approaches the value 1 with the rise of temperature. There are 4 figures, and 5 references, 2 of which are Slavic.

ASSOCIATION: Physical-Chemical Institute imeni L. Ya. Karpov (Fiziko-khimicheskiy institut im. L. Ya. Karpova)

SUBMITTED: May 30, 1957

AVAILABLE: Library of Congress

Card 3/3

On the Coefficient of the Separation of Mixtures Under High Vacuum Evaporation.

20-4-36/51

molecule has the same possibility of getting on either- the condenser- or the evaporation surface if these surfaces are equally great. In this case evaporation conditions occur which are similar to the equilibrium ones. They differ from the latter only by the fact that the evaporation takes place with a noticeable velocity, and the vapors can be seen as a distillate flowing down from the condenser. Formulae are given for ideal binary mixtures (Raoult Law) and for real mixtures. The relation derived for ideal as well as for real mixtures according to various computations lacks at present sufficient data as to be considered as established. The values α_M and α_P for the system di-2-ethyl-hexyl-phthalat- di-2-ethylexyl-sebacinate (in the further course abbreviated: EHPH and EHS) were measured by Khikman and Trevo (quotation 1). The results of their investigations do, however, not confirm the relation (8). The authors have measured the values α_M and α_P for the system dibutyl-phthalat- dibutyl-"aselaat" (DBPh and DBA) between 60 and 120°. Figure 1 gives the experimental results of a 50% -mixture of these substances in dependence on the temperature. Here the results are not contradicting to the theory. As the results did not correspond to those of Hickman and Trevo, the authors investigated the EHPH -EHS-mixture. The results given in figure 3 and 4 are closely agreeing to

Card 2/3

MALOFEYEV, N. A.

AUTHORS: Malyusov, V. A., Malofeyev, N. A., and 20-4-36/51
Zhavoronkov, N. M., Corresponding Member of the AN USSR

TITLE: On the Coefficient of the Separation of Mixtures Under High Vacuum Evaporation (O koeffitsiyente razdeleniya smesey pri isparenii v vysokom vakuumе)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 4, pp. 660 - 663 (JSSR)

ABSTRACT: The evaporation process in high vacuum can take place under equilibrium conditions, if all molecules return finally into the liquid phase after their separation from the evaporation surface in consequence of recoiling from the walls of the closed vessel and by the mutual collision; or, however, if all molecules reach the condensation surface and do not return. There is, however, in the molecular distillation a widely distributed case, when the length of the free path of the molecules (λ) is shorter than the distance between the condenser and the evaporator (h). Here a certain part of the evaporated molecules suffers a series of collisions on their way to the condenser and a portion of them returns to the evaporation surface. In the case of a considerable rise of temperature the length of the free path of the evaporated molecules decreases rapidly and the molecules move chaotically in the space between the evaporator and the condenser. Thus every

Card 1/3

SHEYNMAN, A.B.; MAIOFEYEV, G.Ye.; SERGEYEV, A.I.

Investigating heating of the well-bottom zone in the presence
of fluid inflow. Neft. khoz. 42 no.1:37-42 Ja'64.
(MIRA 17:5)

MALOFEEV, G.Ye.; SMIRNOV, A.I.

Calculating well-bottom heating with consideration of rotation of
the well. Nauch.-tekhn. sbor. po vod. nashl no. 2/197-76 1976.

1. Institut geologii i razrabotki goryudoln ikh-pigovyrk. M. SSSR. (MOSCOW)

MALOFEEV, G.Ye.; SHEYNMAN, A.B.

Calculating the reservoir oil yield when injecting hot water.
Neft. khoz. 41 no.3435-35 Mr '63. (MIRA 17-11)

MALOFEYEV, G.Ye.

Comparative evaluation of formulas for calculating the
temperature of a layer in hot fluid injection treatment.
Neft. khoz. 40 no.4:48-52 Ap '62. (MIRA 15:5)
(Oil reservoir engineering)

SHEYNMAN, Aleksandr Borisovich; SERGEYEV, Aleksandr Ivanovich;
MALOFEYEV, Guriy Yevdokimovich; AMIYAN, V.A., red.; VATOLIN,
G.N., ved. red.; VORONOVA, V.V., tekhn. red.

[Electric heat treatment of oil well bore zones]Elektroteplo-
vaia obrabotka prizaboinoi zony neftiannykh skvazhin. Moskva,
Gostoptekhnizdat, 1962. 98 p. (MIRA 15:5)
(Oil fields--Production methods)

MALOFEYEV, G.Ye; SERGEYEV, A.I.; SHEYNMAN, A.B.

Experimental study of the electric heating of a well bottom zone.
Neft. khoz. 38 no.12:39-44 D '60. (MIRA 14:4)
(Oil fields--Production methods)

MALOFEYEV, G.Ye.

Calculating the distribution of temperature in a layer in hot water injection. Izv. vys. ucheb. zav.; neft' i gaz 3 no.7:59-64 '60. (MIRA 15:5)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M. Gubkina.
(Oil fields---Production methods)

MALOFEYEV, G.Ye.

Modeling the process of reservoir heating during the hot water injection. Izv.vys.ucheb.zav.; neft' i gaz 2 no.9:49-55 '59. (MIRA 13:2)

1. Moskovskiy institut neftekhmicheskoy i gazovoy promyshlennosti imeni akademika I.M.Gubkina.
(Oil reservoir engineering)

MALOFEYEV, G.Ye.

Losses of heat in overlying and underlying rocks caused by
the injection of hot fluid. Izv. vys. ucheb. zav.; neft' i
gaz 2 no.5:37-43 '59. (MIRA 12:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
im. akademika I.M. Gubkina.
(Oil fields--Production methods)

MALOGYEV, G.Ye., Cand Tech Sci -- (diss) "Study of temperature distribution in a petroleum bed and loss of heat at the top and bottom ^{upon the pumping of} ~~by introducing~~ hot water into the bed to increase ^{petroleum} extraction." Mos, 1959, 12 pp (Min of Higher Education USSR. Mos Inst of Petrochemical and Gas Industry im I.M. Gubkin) 150 copies (KL, 36 59, 115)

MALOFYEV, G.Ye.; SERGEYEV, A.I.

Studying thermal properties of oil sands. Izv. vys. ucheb. zav.;
neft' i gaz no.4:67-69 '58. (MIRA 11:9)

1. Moskovskiy neftyanoy institut im. akad. I.M. Gubkina.
(Oil sands) (Heat--Conduction)

MALOFFEYEV, G.Ye.

Experimental study of the reservoir heat during hot water injection. Izv.vys.ucheb.zav.; neft' i gaz 1 no.12:77-83 '58.
(MIRA 12:4)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akad.I.M.Gubkina.

(Secondary recovery of oil)

BELYANSKIY, B.; MALOFEYEV, G.

Payments for agricultural machinery. Fin. SSSR 23 no.4:43-44
Ap '62. (MIRA 15:4)
(Rostov--Agricultural machinery industry--Finance)
(Payment)

MALOFEYEV, A.I.

AUTHORS: Sakharov, V.N., Malofeyev, A.I. 89-10-14/36

TITLE: The Total γ -Activity of U-235 Fission Products (Summarnaya γ -aktivnost' produktov deleniya U²³⁵)

PERIODICAL: Atomnaya Energiya, 1957, Vol. 3, Nr 10, pp. 334-335 (USSR)

ABSTRACT: The γ -activity of U²³⁵ fission products is compared with the γ -activity of a simultaneously irradiated Na²³-target by means of a γ -counting tube which is equally sensitive within a wide γ -energy domain. Irradiation took place in the Russian D₂O reactor. The order of magnitude $Q(t)$ (summed activity) can be represented as follows:

$$Q(t) = 23 t^{-1,45} \frac{\text{MeV}}{\text{sec.fission}} \quad \text{for } 1 < t < 10 \text{ h}$$

$$Q(t) = 0,76 t^{-1,12} \frac{\text{MeV}}{\text{sec.fission}} \quad \text{for } 10 < t < 1000 \text{ h}$$

There are 1 figure and 3 Slavic references

SUBMITTED: May 16, 1957.

AVAILABLE: Library of Congress

Card 1/1

AUTHOR: Malofeyev, A. (Makhashkale) 107-58-7-36/43

TITLE: Twin Clamping Rollers (Dvoynoy prizhimnoy rolik)

PERIODICAL: Radio, 1958, Nr 7, p 56 (USSR)

ABSTRACT: The twin tape-clamping roller described was designed to offset the disadvantages of using a single roller which caused vibration or distortion in the running of the drive shaft of the tape-recorder's electric motor. The twin roller presses evenly on diametrically opposed sides of the shaft and the distortion is compensated out. This arrangement also precludes the braking effect often caused by a single roller, especially on small-power motors of the "DAG-1" type. There is 1 circuit diagram.

1. Magnetic recording systems--Equipment

Card 1/1

USSR/Forestry - Forest Economy.

J-3

Abs Jour : Referat Zhur - Biologiya, No 16, 25 Aug 1957, 69090

productivity, where a grass cover is well developed (acidic pine), it is necessary to bare the mineral layer of the soil, and at times to sow additional seeds in bare spots. Plants left to run to seed exert a positive influence also on reseeding burnt out fellings. For theoretical determination of quantity of seeding plants per hectare of a felling, the author suggests a special formula (as published) to calculate the percentage of wind-felled trees. For cranberry and heather pine groves 8-10 seeding plants per hectare are recommended. In black pine groves it is useful to leave seeding curtains because otherwise in an environment of this type single plants, left to run to seed, are wind felled, have a small radius of effective activity, and the period of reseeding will be drawn out for 10 years or longer.

Card 2/2

- 18 -

Malochka, T.I.

USSR/Forestry - Forest Economy.

J-3

Abs Jour : Referat Zhur - Biologiya, No 16, 25 Aug 1957, 69090
 Author : Malochka, T.I.
 Inst :
 Title : The Role of Pine Plants Left to Run to Seed in Reforesta-
 tion of Concentrated Forest Felling.
 Orig Pub : Sb. tr. Povolzhsk. lesotekhn. in-ta, 1956, No 51, 17-21

Abstract : Observations in Karelian SSR and Leningrad district esta-
 blished that the success of reseedling of entire concentra-
 ted fellings by pines depends mainly on the presence of
 plants left to run to seed and their wind resistance, al-
 so on the conditions of seed germination and the conse-
 quent development of sprouts. In heather pine and cran-
 berry pine groves and other close varieties the natural
 renewal of pines in the presence of a sufficient number
 of plants left to run to seed proceeds favorably and no
 additional aid measures are necessary. On soils of high

Card 1/2

- 17 -

MALOCHKA, T. I.

"The Forestry Significance of Pine Seed-Trees in Concentrated
Cuttings in Various Types of Forests." Cand Agr Sci, Leningrad
Forestry Engineering Acad, Leningrad, 1953. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

MALOCHINSKIY, V.

RUDOY, B., doktor khim.nauk; TKALENKO, V., inzh.; RUDOY, M., inzh.;
MALOCHINSKIY, V., inzh.

Drying chalk at the Gul'kevichi Feed Mill. Muk.-elev.prom.
23 no.9:26-27 S '57. (MIRA 10:11)

1. Novocherkasskiy zooveterinarnyy institut (for Rudoy B.).
2. Gul'kevichskiy kombikormovyy zavod (for Tkalenko, Rudoy, Malochenskiy).
(Gul'kevichi District--Feed mills) (Chalk--Drying)

ALEKSANDROV, G.A.; DORRER, I.A.; MALOCHINSKIY, O.M.; KHLTYCHYEV, S.M.;
CHISTYAKOV, N.I.; SHUL'GIN, K.A.; VENGRENYUK, L.I., red.;
MARKOCH, K.G., tekhn. red.

[Radio communications and broadcasting] Radiosviaz' i ve-
shchaniye. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i
radio, 1961. 503 p. (MIRA 15:2)

(Radio--Receivers and reception)
(Radio--Transmitters and transmission)

Card 2/2 Pub. 89 - 19/27

Periodical : Radio 8, 40-42, Aug 1955

Abstract : losses incurred can be no higher than 75-100 and it becomes necessary to employ a HF-amplifier in the receiver. In the case of long and medium-waves the circuit quality of the input installation should be determined on the basis of a given nonuniformity of the frequency characteristic in the band pass. Diagram; graphs.

Malochinskiy, O.M.

USSR/ Electronics - Radio receivers

Card 1/2 Pub. 89 - 19/27

Authors : Lugovoy, V., and Malochinskiy, O.M.

Title : Calculation of the input installation of a superheterodyne radio receiver

Periodical : Radio 8, 40-42, Aug 1955

Abstract : Mathematical formulas are presented (as an aid for the radio amateur constructor) for the calculation of the input installation for superheterodyne radio receivers. The calculation of the input installation should begin with first determining the required circuit quality. The circuit quality in the case of short-waves with consideration of all the

Institution :

Submitted :

GAVRILYUK, V.V., kand.tekhn.nauk; LYUBIMOV, K.A., kand.tekhn.nauk;
MALOCHINSKAYA, A.N., inzh.

Measurement of an ideal coefficient of protective magnetic
action of a cable sheathing. Elektrotehnika 36 no.11:51-53
N '65. (MIRA 18:11)

GAVRILYUK, V.V.; MALCHINSKAYA, A.N.; ARON, V.A.

New coaxial cables for television antennans. Elektrosvaz' 15
no.6:69-71 Je '61. (MIRA 14:6)
(Television--Antennas)
(Coaxial cables)

MALochinskaya, A.N.

GAVRILYUK, V.V.; MALOCHINSKAYA, A.N.

Selecting armor for communication cables laid along electric
railroads on alternating current. 'Elektrosviaz' 11 no.10:62-71
0 '57. (MIRA 10:10)

(Electric cables)

MARUSHCHAK, G.N.; MALOBRODSKIY, V.I.; MARCHUK, A.I.

Intubation anesthesia in extrapleural pneumolysis. Zdravookhr.
Kazakh. 23 no.1:70-72 '63 (MIRA 17:2)

1. Iz Chingkentskogo oblastnogo protivotuberkuleznogo dispansera.

Solving of Problems in Newton's Second Law

47-5-7/16

ASSOCIATION: The 169th Secondary School, Moscow (169-ya srednyaya shkola, Moskva)

AVAILABLE: Library of Congress

Card 2/2

MALOBRODSKIY, D.L.
AUTHOR: Malobrodskiy, D.L. (Moskva) 47-5-7/16
TITLE: Solving of Problems in Newton's Second Law (Resheniye zadach na vtoroy zakon n'yutona)
PERIODICAL: Fizika v Shkole, September-October 1957, No 5, pp 48-54 (USSR)
ABSTRACT: The article is intended to assist young teachers who have experienced difficulty in teaching the laws of dynamics, in particular the second law. The author points out that the method of solving school physics problems in the second law of dynamics has not been sufficiently developed. It is therefore necessary to find ways to enable students to solve these problems and understand these laws thoroughly. Teachers try to find for each problem a special approach, applicable only for the given case, whereas all the problems on the second law of dynamics can be solved by one method, i.e. if the force expressed by the second law is assumed to be the resultant of all forces affecting the body. He refers to problems of various types contained in two books on physics, explains their contents and purpose, and shows the method of their solution.
Card 1/2 The article cites two Non-Slavic references.

MALOBAR, Bozo

Automatic interurban telephone stations of the ARM 201/2 system.
Telekomunikacije 10 no.1:16-22 Ja '61. (EEAI 10:6)
(Yugoslavia--Telephone) (Telephone)

CILKA, Stefan; MALO, Jolanda

Children-carriers of pathogenic types of E. coli. Bol Univ
Shtet Tirane no. 3/4:34-37 '63.

1. Laboratori Qendror i Kerkimeve dhe prodhimeve mikrobiologjike
(Drejtore Hulo Haderi), Universiteti i Shteteve te Tiranes.

MALO, J.

Importance of the reduction of overhead of machine-tractor stations. p. 21
MECHANISACE ZEMEDELSTVI. Vol. 5, No. 2, Jan. 1955

SO: Monthly East European Accession, (EEAL), LC, Vol. 4, No. 9, Sept. 1955 Uncl.

MALO, DH.

TECHNOLOGY

Periodical *TEKNIKA*. Vol. 5, no. 4, July/Aug. 1958.

MALO, DH. Technical exploitation of accumulators for electric lamps in mining. p. 7.

Monthly List of East European Accessions (MEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

MALC, DH.

The application of the new technique in our mines. p. 15
Tiknika - Vol. 5, No. 2, Mar./Apr. 1958, Tirane, Albania

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 10,
Oct. 58

ZHINKIN, D.Ya.; MAL'NOVA, G.N.; POLONSKAYA, A.P.

Simultaneous hydrolytic condensation of trimethyl- and triethyl-
chlorosilane in an acid medium. Zhur. ob. khim. 35 no.6:1054-
1055 Ja '65. (MIRA 18:6)

ZHINKIN, D.Ya.; MAL'NOVA, G.N.; KORISLAVSKAYA, Zh.V.

Formation of a silazane bond in the ammonolysis of triorganic-
chlorosilanes. Zhur. ob. khim. 35 no.6, 1052-1054. Jo 165.

(MIRA 18:6)

E 61131-05

ACCESSION NR: AP5016409

dissolves in water in large amounts as compared to triethylsilanol. The condensation reaction is fastest at the interface, and is represented as follows:



Furthermore, the condensation of triethylsilanol forming hexaethyldisiloxane takes place in the benzene solution, and the condensation of trimethylsilanol resulting in hexamethyldisiloxane takes place in water. Orig. art. has: 2 formulas.

ASSOCIATION: none

SUBMITTED: 14M4764

ENCL: 00

SUB CODE: 00

NO REF SOV: 004

OTHER: 005

Card

2/2

61181-55 EWT(m) JAS/EM
ACCESSION NR: AP5016409

UR/0079/85/035/006/1054/1055
542.287: 542.936

AUTHOR: Zhinkin, D. Ya.; Mal'nova, G. N.; Polonskaya, A. P.

TITLE: Hydrolytic cocondensation of trimethyl- and triethylchlorosilane in an acid medium

SOURCE: Zhurnal obshchey khimii, v. 35, no. 6, 1963, 1054-1055

TOPIC TAGS: organosilicon compound, silanol, siloxane, silane condensation, hydrolytic cocondensation

ABSTRACT: The hydrolytic cocondensation of triethyl- and trimethylchlorosilane (with benzene as solvent) at 20-25°C forms a mixture containing products of both individual condensation and cocondensation. The mixture obtained has the following composition (in mole %): 39% hexamethyldisiloxane, 12% triethylsilanol, 35% 1,1,1-trimethyl-3,3,3-triethyltrisiloxane, and 24% hexaethyltrisiloxane. On the basis of the considerable difference in the condensation rates of trimethyl- and triethylsilanol (310:0.5), the large quantity of the cocondensation product obtained is unexpected. This is attributed to the fact that when the process is carried out in a heterogeneous medium (solution of the chloride in benzene and water), the trimethylsilanol formed during hydrolysis

Card 1/2

ZHINKIN, D.Ya.; MAL'NOVA, G.N.; POLONSKAYA, A.P.; ANDRIANOV, E.A.

Simultaneous hydrolytic condensation of trimethyl-,
triethylchlorosilanes, and phenyltrichlorosilane. Zhur. ob.
khim. 35 no.5:909-911 My '65. (MIRA 18:6)

L 61185-65

ACCESSION NR: AP5018408

hexamethyldisilazane made up the residue); condensation of triethylaminosilane in the presence of ammonium chloride, which formed triethylaminosilane, the residue consisting of a mixture of hexamethyldisilazane and triethylaminosilane; and triethylchlorosilane with hexamethyldisilazane in the presence of ammonium chloride, which yielded hexamethyldisilazane, triethylchlorosilane, 1,1,1-trimethyl-3,3,3-triethyldisilazane, and hexamethyldisilazane. Orig. art. has: 4 formulas.

ASSOCIATION: none

SUBMITTED: 14 May 64

ENCL: 00

SUB CODE: OC

NO REF SOV: 002

OTHER: 008

Card
2/2

1 62085-65 INT(m) EWP(j) Ps-h JAJ/EM
ACCESSION NR: AP6016408

UR/00/9/66/036/006/1052/1054
546.287; 542.958.3

AUTHOR: Zhinkin, D. Ya.; Mal'nova, G.N.; Gorislavskaya, Zh. V.

TITLE: Formation of the silazane bond in the ammonolysis of triorganochlorosilanes

SOURCE: Zhurnal obshchey khimii, v. 35, no. 6, 1965, 1062-1064

TOPIC TAGS: organosilicon compound, ammonolysis, silane, silazane bond, trans-amination

ABSTRACT: It is shown that in the joint ammonolysis of trimethyl- and triethylchlorosilane, the principal reactions are the transamination of hexalkyldisilazane and condensation of trialkylaminosilanes with trialkylchlorosilanes. The following reactions are described: trimethylchlorosilane with triethylaminosilane in the presence of ammonia, which produced triethylaminosilane, 1,1,1-trimethyl-3,3,3-triethyldisilazane, and hexamethyldisilazane; triethylchlorosilane with triethylaminosilane in the presence of ammonia, which produced triethylaminosilane and hexamethyldisilazane; hexamethyl-
disilazane with triethylaminosilane, which formed hexamethyldisilazane, triethylamino-
silane, and 1,1,1-trimethyl-3,3,3-triethyldisilazane (a mixture of the latter and

Card 1/2

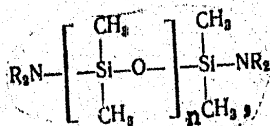
ZHINKIN, D.Ya.; MAL'NOVA, G.N.; GORTSLAVSKAYA, ZH.V.

Simultaneous ammonolysis of triorganochlorosilanes with different radicals at the silicon atom. Zhur. ob. khim. 35 no.5:907-909 (MIRA 18:6)
My '65.

L 16512-66

ACC NR: AP6001496

where $n = 1, 3, 6$ and $R = (CH_3)_3Si$ were prepared by reacting corresponding α, ω -dichlorodimethyl siloxanes with sodium bis-(trimethylsilyl)amide. The work was done according to the method indicated by C. R. Krüger and E. G. Rochow (Angew. Chemie, 74, No. 14, 491-2, 1962). The products were hydrolyzed in two ways: 1) by titrating with aqueous ammonia and with theoretical amounts of water, and then trapping the evolved HCl with pyridine; 2) with excess of water, in an alkaline medium to yield α, ω -bis-(hexamethyldisilazo)-polydimethyl siloxanes (II) having the general structure



where $n = 3, 5, 7$, and 13. Yields, elementary analyses, and physical properties of I and II are tabulated. It was established that in I with $n \geq 3$, the N-Si bond is not hydrolyzable to any practical extent. Orig. art. has: 1 table and 4 structures.

SUB CODE: 07/

SUBM DATE: none/

ORIG REF: 001/

OTH REF: 003

Card 2/2 SM

L 16512-66 EWT(m)/EWP(j)
ACC NR: AP6001496

RM

(A)

SOURCE CODE: UR/0191/65/000/012/0017/0019

AUTHORS: Zhinkin, D. Ya.; Mal'nova, G. N.; Polonskaya, A. P.; Sobolevskiy, M.V.

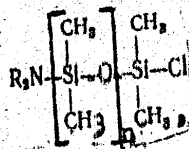
ORG: none

TITLE: Synthesis of α, ω -bis-(hexamethyldisilazo)polydimethylsiloxanes and investigation of their properties

SOURCE: Plasticheskiye massy, no. 12, 1965, 17-19

TOPIC TAGS: siloxane, organosilicon compound, hydrolysis, organic synthetic process

ABSTRACT: Hexamethyldisilylazochloropolydimethyl siloxanes (I) of general structure 1



Card 1/2

UDC: 678.84

2

ZHINKIN, D.Ya.; MAL'NOVA, G.N.; GORISLAVSKAYA, Zh.V.

Coammonolysis of trimethylchlorosilane and phenyl trichloro-
silane. Plast. massy no.11:18 '65. (MIRA 13:12)

MAL'NOVA, G.N.; MIKHEYEV, Ye.P.

Synthesis of silicon-containing arylcarboxylic acid chlorides. *Eur.*
ob.khim. 34 no.2:617-618 F '64. (MIRA 17:3)

PL 19007-65
ACCESSION NR: AP5000748

ASSOCIATION: None

SUBMITTED: 00

NO REF SOV: 001

ENCL: 00

OTHER: 004

SUB CODE: OC

Card 2/2

L 15007-65 BWI(n)/EPF(c)/EPR/ENR(j) Fe-Li/Pr-Li/Ps-Li/Pa-Li EPL RM/WW
 S/0191/64/000/012/0017/0019
 ACCESSION NR: AP5000748

A. THOR; Zhinkin, D. Ya.; Mal'nova, G. N.; Gorislavskaya, Zh. V.; Sobolevskiy, M. V.

TITLE: The reaction of hexamethylcyclotrisilazane with triethylaluminum

SOURCE: *Plasticheskiye massy**, no. 12, 1964, 17-19

TO DO: AGS: silicoorganic compound, silazane, cyclotrisilazane, triethylaluminum

ABSTRACT: At 20-30°C in a nitrogen atmosphere, hexamethylcyclotrisilazane $[(CH_3)_2SiNH]_3$ and 1, 2 or 3 moles of triethylaluminum gave liquid mixtures of complexes and condensation products, formed with the liberation of one molecule of ethane per reacting molecule of triethylaluminum and the simultaneous formation of aluminum-nitrogen bonds. One, two, or three imide bonds in the hexamethylcyclotrisilazane structure were substituted, depending on the amount of triethylaluminum used. The liquid decomposes rapidly on contact with humid air, but heating to 225-270°C in an inert atmosphere gave solid polymers formed with the liberation of a second ethane molecule per molecule of bound triethylaluminum. A trimer structure is proposed for the product obtained from approximately equimolar amounts of initial compounds. Orig. art. has: 3 tables and 18 chemical formulas.

Cord 1/2

L 18952-63

EWP(j)/EPF(c)/EWT(m)/BDS AFFTC/ASD Pc-4/Pr-4 RM/WW/MAY

ACCESSION NR: AP3006536

S/0191/63/000/009/0022/0023

AUTHORS: Mikheyev, Ye. P.; Mal'nova, G. N.

TITLE: The influence of methyldichlorosilane disproportionation products on
the synthesis of methylphenyldichlorosilane by the dehydrocondensation method

SOURCE: Plasticheskiye massy*, no. 9, 1963, 22-23

TOPIC TAGS: methylphenyldichlorosilane methyldichlorosilane disproportionation
products

ABSTRACT: The presence of methyldichlorosilane disproportionation products
boiling in the 44-78C range in the composition of the starting material increases
the yield of methylphenyldichlorosilane in its boric acid (GOST 2629-44) 15
catalysed dehydrocondensation of methyldichlorosilane with thiophene-free benzene.
Orig. art. has: 2 tables, 2 equations.

1/1

Card

MAL'NOVA, G. N.; MIKHEYEV, Ye. P.

Synthesis of symmetrical tetramethyldiphenyldisiloxane-(4,4')-
dicarboxyl chloride. Plast. massy no.11:19 '62.
(MIRA 16:1)

(Silicon organic compounds)

S/191/62/000/011/005/019
B101/B186

AUTHORS: Mal'nova, G. N., Mikheyev, Ye. P.

TITLE: Synthesis of symmetrical tetramethyl-diphenyl-disiloxane-(4,4')-dicarboxylic chloride

PERIODICAL: Plasticheskiye massy, no. 11, 1962, 19

TEXT: From tetramethyl-diphenyl-disiloxane-(4,4')-dicarboxylic acid synthesized according to D. W. Lewis, G. C. Gainer (J. Am. Chem. Soc., 74, 2931 (1952)), the chloride $\text{ClOC-C}_6\text{H}_4\text{-Si(CH}_3)_2\text{-O-(CH}_3)_2\text{-C}_6\text{H}_4\text{-COCl}$, m.p. 54-55°C, was obtained in quantitative yield by reaction with thionyl chloride at 100°C within 7.5 hrs. The phenyl silicon or siloxane bonds were not ruptured. ✓

Card 1/1

Catalytic dehydrocondensation ...

S/191/62/000/008/006/013
B124/B180

is much retarded at a molar ratio 1:3 for the components of 1:3. There are 2 tables. The two most important English-language references are: J. B. Rust, US Patent 2689860 (1954); C. A. 49, 14804 (1955); G. H. Wagner, M. M. Burnham, British patent 7385411 (1955); Ind. Chem. 32, No. 374, 133 (1956). ✓

Card 2/2

S/191/62/000/008/006/000
B124/B180

AUTHORS:

Mal'nova, G. N., Mikheyev, Ye. P.

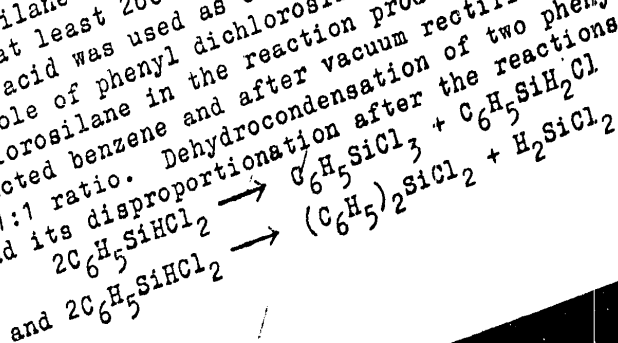
TITLE:

Catalytic dehydrocondensation of phenyl dichlorosilane with benzene

PERIODICAL:

Plasticheskiye massy, no. 8, 1962, 20-22

TEXT: Experiments conducted here show that the dehydrocondensation of phenyl dichlorosilane with benzene proceeds at a molar ratio of 1:3 and a temperature of at least 260°C within 4.5 hrs, the pressure rising to 90 atm. Boric acid was used as catalyst. 0.46 moles of hydrogen was released per mole of phenyl dichlorosilane. For this ratio, the yield of diphenyl dichlorosilane in the reaction products obtained after driving out the unreacted benzene and after vacuum rectification is 30% higher than with a 1:1 ratio. Dehydrocondensation of two phenyl dichlorosilane molecules and its disproportionation after the reactions:



Card 1/2

Purification of industrial ...

S/191/62/000/005/006/C12
B110/B101

unchanged. At 150°C, air was ducted through at a rate of 250-280 liter/hr and a ratio of 4 liter air per g I. In order to separate phenyl trichlorosilane from I, partial esterification with isobutyl alcohol (6-8% of the weight of the fraction) was carried through at 40-80°C with subsequent heating to 120-150°C. Dimethyl phenyl chlorosilane was separated from I in a packed column with 25 theoretical plates. The fraction with dimethyl phenyl chlorosilane, ~26-35% of the total charge, may be used for the production of organosilicon varnishes, in the same way as I. I is then distilled off at a reflux ratio of 15-20. The residue of 3-6%, containing polysiloxanes may also be used for organosilicon varnishes. Purified I had the following characteristics:

$n_D^{20} = 1.5182-1.5186$; $d_4^{20} = 1.1762-1.1782$; Cl content = 37.00-37.39%;
Si content = 14.58-14.82%, $MR_D = 49.23-49.28$. There are 3 tables.

Card 2/2

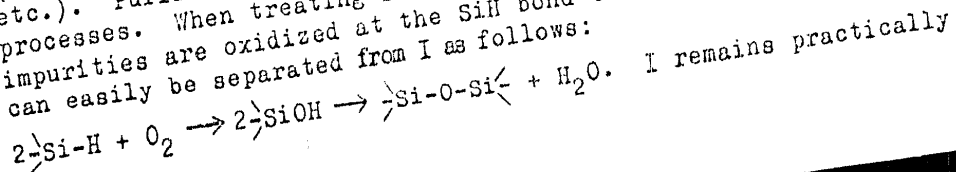
S/191/62/000/005/006/012
B110/B101

AUTHORS: Kleynovskaya, M. A., Sobolevskiy, M. V., Mikheyev, Ye. P.,
Mal'nova, G. N., Ginzburg, A. S.

TITLE: Purification of industrial methyl-phenyl dichloro silane
obtained by the method of catalytic dehydrocondensation

PERIODICAL: Plasticheskiye massy, no. 5, 1962, 19-22

TEXT: The composition of industrial methyl-phenyl dichloro silane (I) and its purification from impurities was studied. These are: 0.5-2% dimethyl phenyl chlorosilane (boiling point 195°C), 1-3% phenyl trichlorosilane (boiling point 201.5°C) and 1-3% compounds with hydrogen-silicon bond (methyl phenyl chlorosilane, phenyl dichlorosilane, phenyl chlorosilane etc.). Purification combines separation methods with rectification processes. When treating industrial I with dry air at 150°C, the impurities are oxidized at the SiH bond to high-boiling siloxanes, which can easily be separated from I as follows:



Card 1/2

89920

Synthesis of methyl-(dimethyl...

S/191/61/000/002/008/012
B124/B204

Legend to the table: Results of rectification of the mixture

1) Number of fraction; 2) Composition of the fraction; 3) Boiling point °C; 4) Pressure mm Hg; 5) Quantity of the fraction a) g, b) percentage by weight of the mixture; 6) Mixture of chlorosilanes with methylchlorosilane; 7) Methylchlorosilane; 8) Mixture of methylchlorosilane with methyltrichlorosilane; 9) Methyltrichlorosilane; 10) Transition fraction; 11) Dimethylaniline; 12) Transition fraction; 13) Methyl-(dimethyl-aminophenyl)-dichlorosilane; 14) Bottoms; 15) Losses.

о фракции	
% от веса смеси	d_4^{20}
1,5	—
12,0	1,1098
2,1	1,1675
11,1	1,2420
2,8	—
32,5	0,9628
2,9	—
25,8	—
5,2	—
4,1	—

Card 4/4

60920

S/191/61/000/002/008/012
B124/B204

Synthesis of methyl-(dimethyl...

hindrance of the substitution in o-positions, which is caused by the highly ramified ammonium group. The conversion of the m-isomers into the ammonium form is little probable because a conjugation of all π -formations in the ammonium form of the m-isomer is impossible. The results of the rectification of the reaction products obtained are given in a table. There are 1 table and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

№ фракции 1	Состав фракции 2	Температура кипения, °C 3	Давление мм рт. ст. 4	5 Количеств
				г
1	Смесь хлорсиланов с метилдихлорсиланом	36—38		4,35
2	Метилдихлорсилан	38—44		35,65
3	Смесь метилдихлорсилана с метилтрихлорсиланом	44—64	756	6,35
4	Метилтрихлорсилан	64—66,5		32,7
5	Промежуточная	66,5—191		8,45
6	Диметиланилин	80	11	96,15
7	Промежуточная	80—140,5	11—6	8,63
8	Метил-(диметиламинофенил)-дихлорсилан	140,5—144,5	6	76,28
9	Кубовый остаток			15,45
10	Потери			11,29

Card 3/4

89920

S/191/61/000/002/008/012
B124/B204

Synthesis of methyl-(dimethyl...

As a catalyst, boric acid was used. Simultaneously with the given reaction, the disproportioning of the methyldichlorosilane develops, whereby mainly methyltrichlorosilane is formed. By means of side reactions, mainly the disproportioning of $\text{CH}_3\text{SiHCl}_2$, the methyl-dimethylaminophenyl)-dichlorosilane yield is decreased; it amounts to 33%. The Raman spectrum proves that within the isomer mixture the p-isomer predominates, and the m-isomer practically does not exist. The respective investigations were carried out by K. K. Popkov. The predominant forming of the p-isomer indicates that the methyldichlorosilane is dehydrocondensated with the ammonium compound of dimethylaniline and of chlorosilane, i.e. with an aromatic substance. The predominant forming of the p-isomer of methyl-(dimethylaminophenyl)-dichlorosilane is in good agreement with the classification of catalytic dehydrogenating condensation as suggested by the authors and A. L. Klebanskiy as a nucleophilic substitution of hydrogen in the aromatic ring by the silyl group. The forming of a small quantity of the o-isomer, which formally is in contradiction with the rules of orientation, is, according to the authors' opinion, due to the steric

Card 2/4

89920

S/191/61/000/002/008/012
B124/B204

53700

AUTHORS:

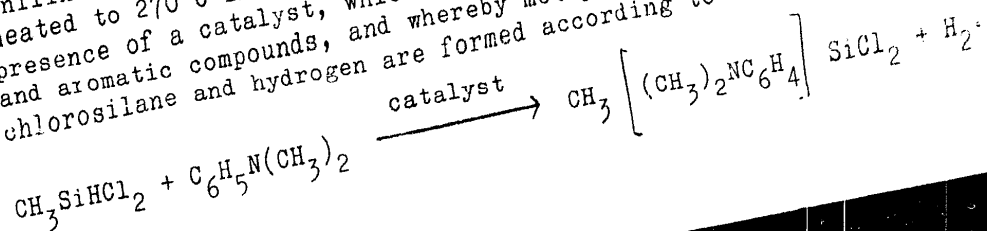
Mikheyev, Ye. P., Mal'nova, G. N.

TITLE:

Synthesis of methyl-(dimethylaminophenyl)-dichlorosilane by means of catalytic dehydrogenation condensation of methyl-dichlorosilane with dimethylaniline

PERIODICAL: Plasticheskiye massy, no. 2, 1961, 31-33

TEXT: For the purpose of synthesizing methyl-(dimethylaminophenyl)-dichlorosilane, the interaction of methyl-dichlorosilane with dimethylaniline was investigated and it was found that the initial substances when heated to 270°C in the autoclave dehydrogenation condensation in the presence of a catalyst, which is characteristic of chlorosilane hydride and aromatic compounds, and whereby methyl-(dimethylaminophenyl)-dichlorosilane and hydrogen are formed according to the reaction



Card 1/4

S/191/61/000/001/005/015
B101/B205

Catalytic dehydrocondensation of

that primarily meta-derivatives are formed is explained in detail. According to previous papers of the authors (Refs. 4, 5), boric acid first forms a silyl hydride borate: $\text{H}-\overset{|}{\text{Si}}-\text{O}-\text{B}<$. As boron is a strong electron acceptor, it shifts the electron density and causes protonization of hydrogen bound to Si according to the reaction $\text{XC}_6\text{H}_5 + \text{H}-\overset{|}{\text{Si}}-\text{O}-\text{B}< \rightarrow$

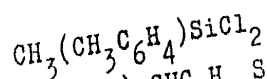
$\rightarrow \text{C}_6\text{H}_5-\overset{|}{\text{Si}}-\text{O}-\text{B}< + \text{H}_2$. When the aromatic ring is substituted, the silyl borate anion is added in meta position. Similar complexes as formed with boric acid are assumed for BF_3 , BCl_3 , and AlCl_3 : $\text{H}-\overset{|}{\text{Si}}-\text{Cl}-\text{MHal}_3$. The formation of such complexes is considered to be more probable than the formation $[\text{H}:\text{MHal}_3]^+$. There are 1 table and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc.

Card 4/4

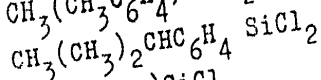
S/191/61/000/001/005/015
B101/B205

Catalytic dehydrocondensation of

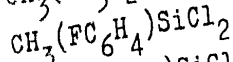
Compound

Experimental ratio
o-isomer m-isomer p-isomer

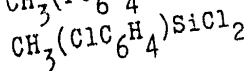
1 10 3



1 12 3



1 4 2



1 6 4

The amount of CH_4 formed by reaction with benzene and toluene was 3.6 and 3.4%, respectively; with cumene, 10.5%; with fluorobenzene, 12.6%; with chlorobenzene, 6.5%. Equal amounts of dimethyl dichlorosilane were obtained by reaction with benzene and toluene. This is taken as an indication that CH_4 and $(\text{CH}_3)_2\text{SiCl}_2$ are formed, not by decomposition of the hypothetical adducts, but by disproportionation of $\text{CH}_3\text{SiHCl}_2$. The fact

Card 3/4

S/191/61/000/001/005/015
B101/B205

Catalytic dehydrocondensation of ...

was heated in an autoclave with C_6H_6 , $C_6H_5\cdot CH_3$, $C_6H_5\cdot CH(CH_3)_2$, and C_6H_5Cl in the presence of 0.1% H_3BO_3 , and with C_6H_5F in the presence of 0.3% H_3BO_3 . The molar ratio of methyl dichlorosilane to the aromatic hydrocarbon was 1:3. Reaction temperature was 230-290°C. Heating was stopped as soon as the pressure in the autoclave had become constant. Under these conditions, which are described as being an optimum, the following dehydrocondensation products were obtained: 40% yield with C_6H_6 ; 41% with $C_6H_5\cdot CH_3$; 24% with $C_6H_5\cdot CH(CH_3)_2$; 18% with C_6H_5F ; and 25% with C_6H_5Cl . The mixture of the reaction products was fractionated. The resulting mixture of isomers of the new compound methyl-cumyl dichlorosilane boils between 127.6 and 137.6°C at a pressure of 26-28 mm Hg; $d_4^{20} = 1.1020$; $n_D^{20} = 1.5134$. Analysis has shown that this fraction follows the formula $C_{10}H_{14}SiCl_2$. The ratio of o-, m-, and p-isomers in methyl-aryl dichlorosilanes was determined from Raman spectra:

Card 2/4

S/191/61/000/001/005/015
B101/B205

AUTHORS: Mikheyev, Ye. P., Klebanskiy, A. L., Mal'nova, G. N.,
Popkov, K. K.

TITLE: Catalytic dehydrocondensation of silane chlorohydrides
with aromatic compounds

PERIODICAL: Plasticheskiye massy, no. 1, 1961, 19 - 21

TEXT: A study has been made of the reaction $\text{Si-H} + \text{H-Ar} \rightarrow \text{H}_2 + \text{Si-Ar}$ ✓
the temperature of which can be largely reduced by such catalysts as BCl_3 ,
 H_3BO_3 , AlCl_3 , etc. A paper by A. J. Barry et al. (Ref. 1) is discussed, in
which hydrogen is supposed to undergo electrophilic substitution at the
aromatic ring, accompanied by the catalytic formation of the complex
 $[\text{H}:\text{BCl}_3]$. In addition, by-products with cyclohexadiene structure are
formed. These statements have been checked here. Methyl dichlorosilane

Card 1/4

Catalytic Interaction Between Alkyl Dichloro Silanes and SO₂/O₂-123-4-33/53
Halogen Substitution Products of Benzene

references, 1 of which is Soviet.

PRESENTED: July 14, 1958, by B. A. Kazanskiy, Academician

SUBMITTED: July 10, 1958

Card 3/3

Catalytic Interaction Between Alkyl Dichloro Silanes and SnCl_4 -123-4-33/53
Halogen Substitution Products of Benzene

dependence of the yield of ethyl chloro-phenyl dichloro silane on the temperature of the synthesis. The following products are formed in the reaction of methyl dichloro silane: 6% remain unchanged; ~7% methyl dichloro silane, ~5% dimethyl dichloro silane, ~60% unchanged chloro benzene, ~4% intermediate fraction (boiling point 44-128°/29 mm), ~10% methyl chloro-phenyl dichloro silane, and ~5% residue in the flask. Gaseous products contain 86.5-87.5% hydrogen, 9-10% methane, and 0.7-1% hydrogen chloride. The isomers of methyl chloro-phenyl dichloro silane are contained in the fractions as follows: ortho- ~20%, meta- ~45%, and para- ~35%. The total yield of all isomers amounts to 24-27% of the reacted methyl dichloro silane (the ratio of the isomers was determined by K. K. Pöpkov). The yields were also given for other substances mentioned above. From table 2 it may be seen that in the said reaction the reactivity of the benzene nucleus decreases regularly with the successful substitution of a hydrogen atom by a halogen atom. This decrease is the more abrupt the higher the polarity of the halogen. There are 2 figures and 3

Card 2/3

5(3)

AUTHORS: Mal'nova, G. N., Mikheyev, Ye. P., SOV/20-123-4-33/53
Klebanskiy, A. L., Filinonova, N. P.

TITLE: Catalytic Interaction Between Alkyl Dichloro Silanes and
Halogen Substitution Products of Benzene (Kataliticheskoye
vzaimodeystviye alkildikhlorosilanov s galoidezameshchennymi
benzola)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4,
pp 693 - 695 (USSR)

ABSTRACT: The above interaction is mentioned in only a few patents
(Ref 1). The authors investigated the same interaction of
methyl dichloro silane with chloro benzene and fluoro benzene
as well as the same reaction of ethyl dichloro silane with
chloro benzene. Boric acid with its numerous advantages was
used as catalyst, or more accurately as source material for
the catalyst. A) Reaction of methyl and ethyl dichloro silane
with chloro benzene. The temperature necessary for introducing
the reaction amounts to 255° (methyl dichloro silane); it is
10° higher for ethyl dichloro silane. Table 1 shows the

Card 1/3

On the Catalytic Phenylation of Hydrogenous Alkyl-
Chlorosilanes by Benzene

20-4-21/52

There are 2 tables, and 7 references, 1 of which is Slavic.

PRESENTED: June 28, 1957, by B. A. Kazanskiy, Academician

SUBMITTED: June 27, 1957

AVAILABLE: Library of Congress

Card 3/3

Card 1/3

increase of compression in ...

On the Catalytic Phenylation of Hydrogenous Alkyl-
Chlorosilanes by Benzene

20-4-21/52

elimination of hydrogen ceases, according to the temperature of synthesis, at 290° after one hour, at 250° after two hours. Warming for a longer time is not profitable (see patents, references 2-4,6) as in that case the exploit of the final product decreases. With 0,1% boric acid the optimal temperature is by 240°. If the temperature is caused to fall by 5-10° the reaction is decisively retarded. The comparatively small exploit of alkyl-phenyl-dichlorosilane is caused on the whole by the high capability of reaching of the alkyl-dichlorosilanes which suffer not only phenylation but different other transformations such as changes of thermal rearrangement, condensation, and reaction with alkyl-phenyl-dichlorosilane. The details of table 2 confirm the assumption that the augmentation of the proportion of benzene will increase the exploit of alkyl-phenyl-dichlorosilane. Under optimal conditions it reaches 40% of the reacting methyl-dichlorosilane. Finally by-products are mentioned. The reciprocal reaction of benzene and ethyl-dichlorosilane in presence of boric acid is analogous. The optimal temperature is about 250°.

Card 2/3

The influence of catalysts ...
method for preparation of intermediate compounds as for instance
chlorobenzene from benzene. There is 1 table.

S/661/61/000/006/015/081
D205/D302

Card 3/3

X

S/661/61/000/006/015/081
D205/D302

The influence of catalysts...

products of H_3BO_3 are, however, preferable because they are liquid and do not cause obstructions in the high pressure pumps. Other catalysts investigated which were inferior to those mentioned above, included $[(CH_3)_3SiO]_3B$, BCl_3 , $AlCl_3$ and $(C_2H_5)_2O \cdot BF_3$. The optimum amount of the liquid catalyst prepared from H_3BO_3 and methyl dichlorosilane is 1.35% (on the reagent weight). The catalyst is dissolved, in the arylation of alkyl dichlorosilanes, by toluene, xylene, chlorobenzene, fluorobenzene, etc. V. M. Svetozarovy (VNI-ISK, Leningrad), V. S. Chugunov (IKhS AN SSSR, Leningrad), M. I. Katyrov (Moscow), V. F. Mironov (IOKh AN SSSR, Moscow), Ye. P. Mikheyev (Moscow) and R. Kh. Freydlina (INEOS AN SSSR, Moscow) took part in the discussion on the relative merits of the two methods of introducing a chlorosilyl group, the catalytic and the thermal. Ye. P. Mikheyev argued that the first method carried out at around 250°C and 100 atm. will always be more attractive than the second which employs temperatures of the order of 650°C at atmospheric pressure. Furthermore, there is no need in the catalytic

Card 2/3

5.3700

37758

S/661/61/000/006/015/081
D205/D302

AUTHOR: Mal'nova, G. N.

TITLE: The influence of catalysts on the condensation reaction of alkyl dichlorosilanes with aromatic compounds

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soedineniy; trudy konferentsii, no. 6, Doklady, diskussii resheniye. II Vses. Konfer. po khimii i prakt. prim. kremneorg. soed., Len. 1958. Leningrad. Izd-vo AN SSSR, 1961 87-90

TEXT: A series of catalysts was investigated and the yields of methyl phenyl dichlorosilane obtained by the reaction of benzene with methyl dichlorosilane in their presence is compared. The highest yields were obtained with H_3BO_3 and a catalyst prepared by reacting 1 g-mol of H_3BO_3 with 6 g-mols of methyl dichlorosilane at atmospheric pressure, with heating during 50 hours. The yields of phenylation were 37 - 40% with each of the catalysts, the reaction

Card 1/3

X

MAL'NOVA, G. N., Cand Chem Sci - (diss) "Investigation of the reaction of catalytic dehydrocondensation of methyldichlorosilane with benzene, its homologs and substituted forms." Leningrad, 1960. 15 pp; (State Committee of the Council of Ministers USSR for Chemistry, State Order of Labor, Red Banner Institute of Applied Chemistry); 150 copies; price not given; (KL, 19-60, 130)

MAL'NOVA, G. N., et al.

Ye P. Mikheyev, G. N. Mal'nova et al., "The Catalytic Interaction of Alkyldichlorsilanes with Benzene and its Derivatives."

Report presented at the Second All-Union Conference on the Chemistry and Practical Application of Silicon-Organic Compounds held in Leningrad from 25-27 September 1958.

Zhurnal prikladnoy khimii, 1959, Nr 1, pp 238-240 (USSR)

MAL'NIKOV, S.A.; GORBACHEVA, F.Ye.; YAMSHCHIKOVA, N.A.

Use of exercise therapy in progressive muscular dystrophy.
Trudy 1-go MMI 24:203-212 '63 (MIRA 17:3)

MAL'NIKOV, O.A., pref.

Studies on the ultraviolet spectrum of the sun. Priroda 48 no.6:
75-78 Je '59. (MIRA 12:5)

1. Glavnaya astronomicheskaya observatoriya AN SSSR, Pulkovo.
(Spectrum, Solar)